Hydrologic Radio Frequency Licensing Guide

Version 1.0 November 5, 2009

Table of Contents

1.	DO	CUMENT OVERVIEW	1
	1.1	OVERVIEW	
	1.1	FREQUENCIES AVAILABLE FOR USE	1 1
	1.3	CONFIGURING YOUR WEB BROWSER	
	1.5	CONFIGURING LOCK WEB DROWSER	
2.	LIC	CENSING PROCESS	3
	2.1	NEW APPLICANTS	3
	2.2	REQUESTING NEW LICENSES	
		PHASE I - AOLLECT ALL PERTINENT INFORMATION FOR EACH LICENSE REQUIRED	
		PHASE II - ANTER ALL INFORMATION COLLECTED FROM PHASE I INTO THE ULS	
		4.1. Application Information Tab	
	2.4	4.2. Applicant Tab	
	2.4	4.3. Ownership/Qualification Questions Tab	
	2.4	4.4. General Certification Statements Tab	6
	2.4	4.5. Control Point Tab	8
	2.4	4.6. Administrative Tab	8
	2.4	4.7. Location Tab	10
	2.4	4.8. Antenna Tab	12
	2.4	4.9. Frequency Tab	13
	2.5	PHASE III - AUBMIT EXPORTED ULS INFORMATION TO THE INTERDEPARTMENTAL RADIO	
		Frequency Coordinating Group (HRFCG) For Approval	
	2.6	PHASE IV - AOMPLETE YOUR ULS APPLICATION BY FILING YOUR APPLICATION	15
	2.7	MODIFYING EXISTING LICENSES	17

1. Document Overview

1.1 Overview

The Federal Communications Commission (FCC) provides a web-based method for applying for transmitter licenses called the Universal Licensing System (ULS). The ULS is accessible via the web at http://wireless.fcc.gov/uls/ and works with most popular web browsers.

The purpose of this guide is to assist Automated Flood Warning System (AFWS) owners on how to obtain FCC licenses for Federal hydrologic radio frequencies using the ULS. This guide is intended to assist in seeking a license for:

- A fixed station
- State or local government use
- Federal hydrologic frequencies
- Low-power single-frequency transmission only

The instructions contained in this document are current as of April 2005.

1.2 Frequencies Available For Use

The following Federal hydrologic frequencies (in MHz) are available for use through the ULS:

All Frequencies shown in MHz							
169.4250	170.2250	171.0250	171.8250	406.125	412.6625	415.1250	
169.4375	170.2375	171.0375	171.8375	406.175	412.6750	415.1750	
169.4500	170.2500	171.0500	171.8500		412.6750		
169.4625	170.2625	171.0625	171.8625		412.6875		
169.4750	170.2750	171.0750	171.8750		412.7125		
169.4875	170.2875	171.0875	171.8875		412.7250		
169.5000	170.3000	171.1000	171.9000		412.7375		
169.5125	170.3125	171.1125	171.9125		412.7625		
169.5250	170.3250	171.1250	171.9250		412.7750		

1.3 Configuring Your Web Browser

To use the ULS through a web browser you must have:

- Either a Netscape 4.7.x, Mozilla Firefox 1.0, or Internet Explorer 5.5+ browser.
- Java & JavaScript must be enabled.
- "Accept All Cookies" must be enabled.

It may be easier to try your current browser with current configuration settings to determine if it will work. If unsuccessful, download the browser software available from the ULS website to successfully run the ULS application. More information is available at http://esupport.fcc.gov/gettingconnected.htm. You should also review the FCC's online filing assistance at http://esupport.fcc.gov/licensing.htm

2. Licensing Process

2.1 New Applicants

Before you use the ULS system the first time, you must register with the ULS. When you have registered, you will obtain:

- FCC Registration Number (FRN)
- Password

You must provide the EIN for your agency, as well as contact information, to use the ULS.

2.2 Requesting New Licenses

IMPORTANT: The ULS system purges all incomplete applications for both license modifications and initial license requests 30 days after the application process begins. To avoid losing your work, use the "Check Errors" button to re-start the 30-day clock.

2.3 Phase I - Collect All Pertinent Information For Each License Required

You need to collect the following information for each hydrologic frequency license:

- Applicant agency name, name of contact person, address, phone, email
- Control Point address, city/town, state, county, phone number for each administrative office that controls or administers the station.
- Administrative -- each existing call sign that is part of this network.
- Location latitude, longitude, street address or location description, city/town, state, antenna support structure type, ground elevation, height of support structure, height from ground to tip of antenna.
- Antenna azimuth in degrees (would be 360 if omni type), beamwidth (would be 360 if omni type), polarization (e.g., vertical, horizontal, etc.), gain in dB.
- Frequency transmit frequency, operational output power (watts), ERP.

2.4 Phase II - Enter All Information Collected From Phase I Into The ULS

Enter all of the information collected in Phase I into the ULS, then select "Online Filing." After the ULS application finishes loading, enter your information in the following order:

2.4.1. Application Information Tab

In the "Application Information" tab, the greyed out boxes are auto-filled. The editable fields (non-greyed out) should have the following information filled-in.

NOTE: The editable information should be filled-in as depicted in the sample application below:

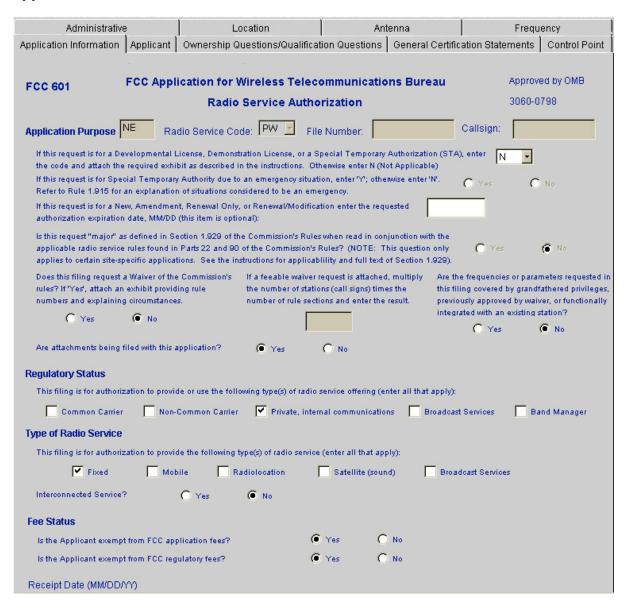


Figure 2.4-1 - Sample "Application Information" Tab

2.4.2. Applicant Tab

Below is "Applicant" tabbed-panel based on sample data; it should be customized based on your own information.

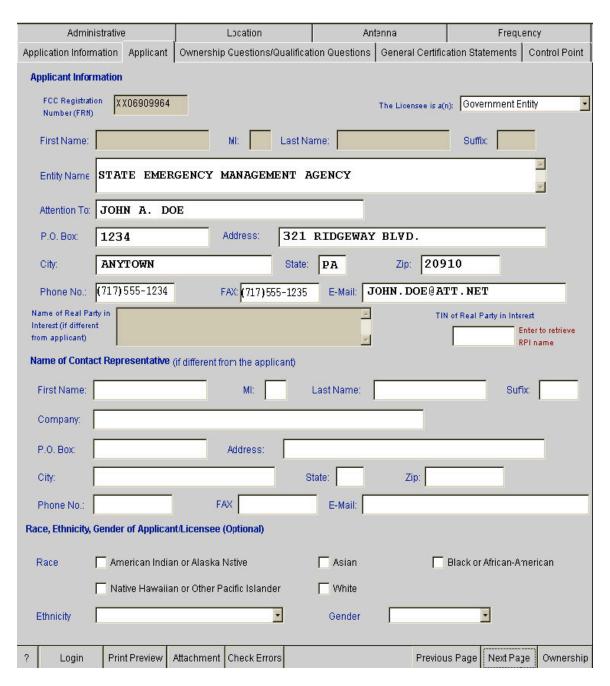


Figure 2.4-2 - Sample "Applicant" Tab

2.4.3. Ownership/Qualification Questions Tab

Answers to the questions displayed in the figure below are required and should be correct to the best of your knowledge.

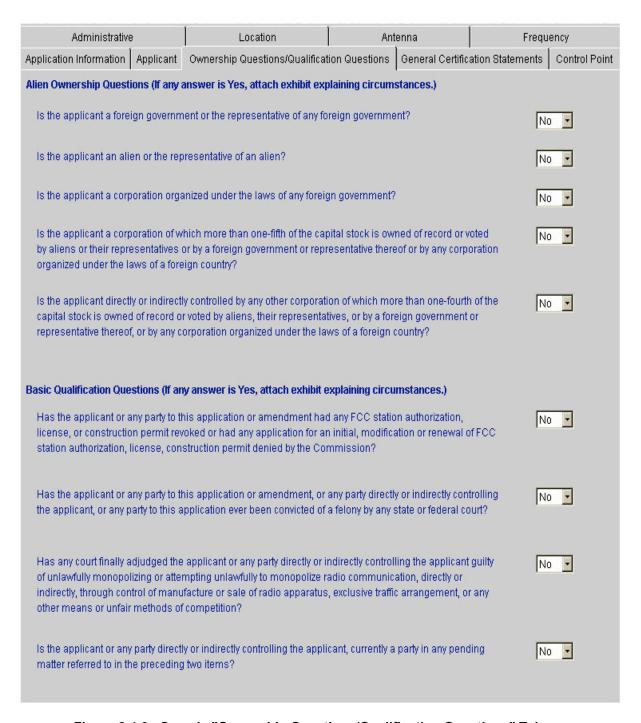


Figure 2.4-3 - Sample "Ownership Questions/Qualification Questions" Tab

2.4.4. . General Certification Statements Tab

The person who is responsible for the contents of the application (probably the contact person) must type in his/her name and title. The signature field will automatically be filled in with this person's name.

	Administrative Location Antenna Frequency								ncv]		
App	lication Inform	1	Applicant	 Ownership	Questions/Qu	l Jalification		1	l al Certification Sta	1	Control Point
200101											
	General Certification Statements										
	The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.										
spe *If:	The applicant certifies that grant of this application would not cause the applicant to be in violation of any pertinent cross-ownership, attribution, or spectrum cap rule.* *If the applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.										
	e applicant certif part of this appli							nts, or doc	uments incorporated	by reference	are material,
of t	the Anti-Drug Abo	use Act of oplication	f 1988, 21 ns filed in s	U.S.C § 862, be ervices exempte	cause of a convi d under Section	ction for pos 1.2002(c) o	session or dis f the rules, 47	tribution o	l of Federal benefits f a controlled substa 2002(c). See Section	nce. This ce	rtification
	e applicant certif plication, or (3) is						mission, (2) is	filing an u	pdated Form 602 si	multaneously	with this
froi of i	m routine environ	mental e idiation in	evaluation n excess of	for RF exposure the limits speci	as set forth in 47	C.F.R. § 1.	1307(b); or, (2	2) have be	equested are either: en found not to caus e subject of one or n	se human exp	osure to levels
Тур	Typed or Printed Name of Party Authorized to Sign:										
F	irst Name:	John			MI: A	Last	lame:	Doe		Suffix	
Т	itle	Radio	Commu	nications	Specialis	t					
S	ignature:	John .	A. Doe								
me de W	Upon grant of this license application, the licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application. WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).										
?	Login	Print	Preview	Attachment	Check Errors				Previous Page	Next Pag	e Ownership

Figure 2.4-4 - Sample "General Certification Statements" Tab

2.4.5. Control Point Tab

A Control Point can be defined as the administrative office that is responsible for maintenance of these gages and/or receives the data. The following may be helpful to remember:

- At least one control point must be listed.
- Multiple Control Points can be listed on a license.
- The maximum number of locations that can be associated to a single control point is 20.

Click on the "Add" button and then complete the location/phone information for the Control Point used by all of the stations listed on the license.

The figure below shows an application after one Control Point has been added.

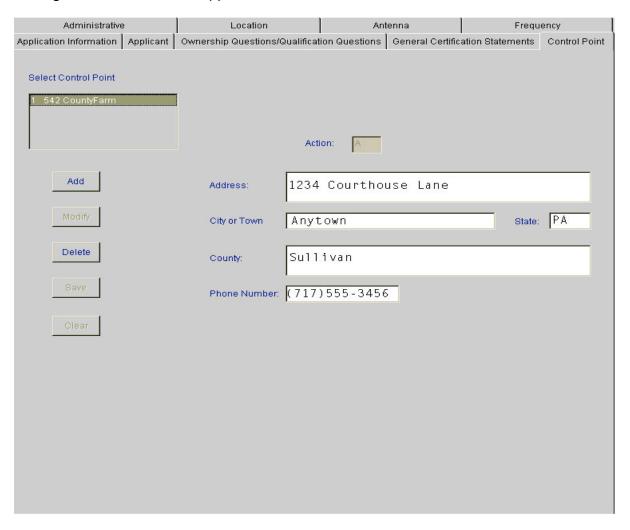


Figure 2.4-5 - Sample "Control Point" Tab

2.4.6. Administrative Tab

Code of Federal Regulations Part 90 can be used as the applicable rule for your application. Use the applicable subpart suited to your use. The "Describe Activity"

text box should be completed with a description similar to the one used in the sample application.

The Frequency Coordinator Section is not-editable. (Your application needs to be coordinated with the Federal Hydrologic Radio Frequency Coordination Group before submitting your application to the FCC. See Phase III of these instructions.)

Click on the "Add Call Sign" button and list all associated call signs that you have obtained from the FCC that are also part of this local network. You may need to use the "Save Call Sign" button before adding a second call sign.

Application Information Application	oplicant Ownershi 			eral Certification Sta	
Administrative Eligibility		Location	Antenna		Frequency
Rule Section	Describe Activity	<state inten<="" td="" your=""><td>ded usage></td><td></td><td>E</td></state>	ded usage>		E
Frequency Coordinator In	formation (if not sel	f-coordinated)			
Freq Coordination #					
Name of Freq Coordinator					Ī
Other					
Telephone Number		Coordination Da	nte	Has this applicati	
Extended Implementation	(Slow Growth)				
Are you requesting a new o If 'Yes', attach an exhibit wi Associated Call Signs	th a justification and a		tion schedule. No	•	
Select Call Sig	gn#		Add Call Sign		
WPHF929 WPHF933	Action	Call Sign	Modify Call Sign		all Sign
WPHF937	□ ^	WPHF929	Delete Call Sign		
Broadcast Auxiliary Only					
Is there an associated Pare	ent Station?				
Facility Id of Parer Station	nt Radio Servi Parent Stat	City of	Parent Station Principal Community		Parent Station Il Community
If there is no associated pa station, this application is	AND ADMINISTRATION OF REAL PROPERTY.			e of Primary peration	
? Login Print P	review Attachment	Check Errors		Previous Page	Next Page Ownership

Figure 2.4-6 - Sample "Administrative" Tab

2.4.7. Location Tab

You can add up to 6 transmitter locations per FCC licensing application. Complete this tab by doing the following:

- Click the "Add" button.
- Complete the editable information for a location.
- Choose "F Fixed" for the location.
- Select "N/A" for FCC Antenna Structure Registration # unless the FCC's TOWAIR Determination has stated that ASR registration is necessary.

Completion of Airport Identifier and Site Status boxes is not needed unless the transmitter is near an airport.

If your proposed site is within the quiet zone, you must enter the date that authorization was obtained.

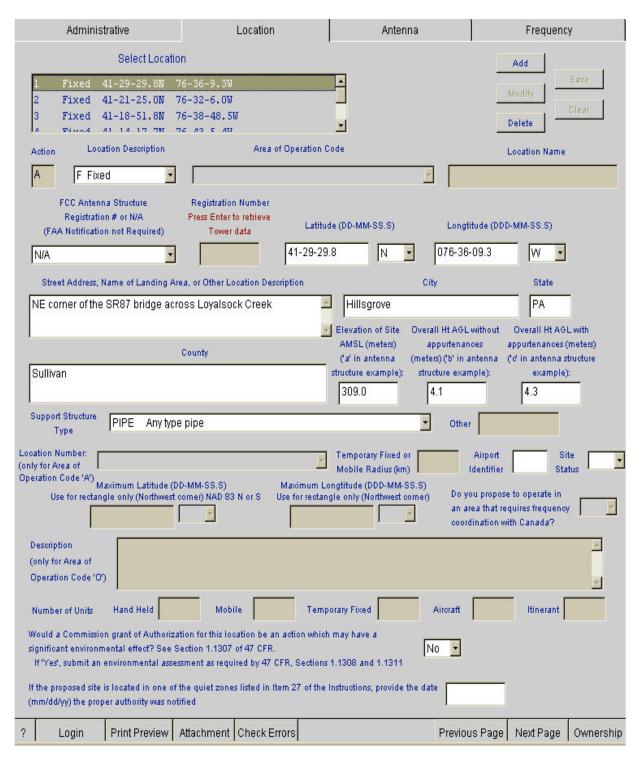


Figure 7: Sample "Location"

2.4.8. Antenna Tab

Click on the first antenna location under the "Select Location" list. (You will see up to 6 locations). Click on the "1" under "Select Antenna". After doing that you should now be able to click "Add" to enter specifications for that antenna. Since this location is not a repeater there should be only one antenna in the list.

AAT should be left blank. For "Antenna Ht.", enter the height from tip to ground. If the antenna is a yagi, enter the azimuth relative to the receiver; otherwise, for an omni antenna enter "360". Beamwidth will also be "360" if the antenna is omni-directional. The polarization and gain for your transmitter should be specified in the manufacturer's literature.

The figure below shows antenna information for a location that uses a yagi antenna.

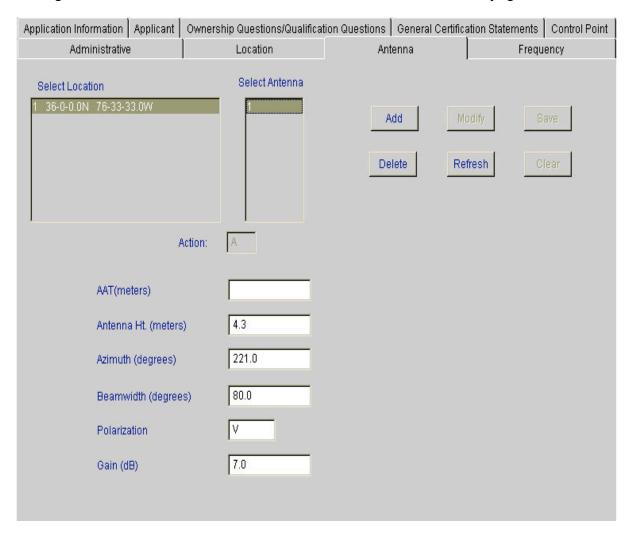


Figure 2.4-7 - Sample "Antenna" Tab

2.4.9. Frequency Tab

"Frequency" is the final tab of the ULS licensing application and is completed by doing the following:

- Click on the first location in the "Select Location" >> Select your antenna >> "Add Freq"
- The lower fields on the form should now be editable. Place your frequency in the "Lower or Center Frequency" field (do not use the other frequency tabs).
- Enter "FX" for Station Class and "1" for Number of Units.
- Enter the operational power and ERP for the transmitter.

You must click the "Save Freq" button before you can list emission information. Then, select the specific frequency and click "Add Emission" before typing in the emission designator. It is suggested that you use the same emission designator as in the sample application. The first of the two numbers of the emission designator is the transmitter bandwidth in KHz, which in this application was 11 (If you can use 8K that is even better!). Then click "Save Emission". There will be only one emission listed because there should be just one frequency per location.

The figure below shows frequency and emission information that have been added for the third location transmitting with a single antenna.

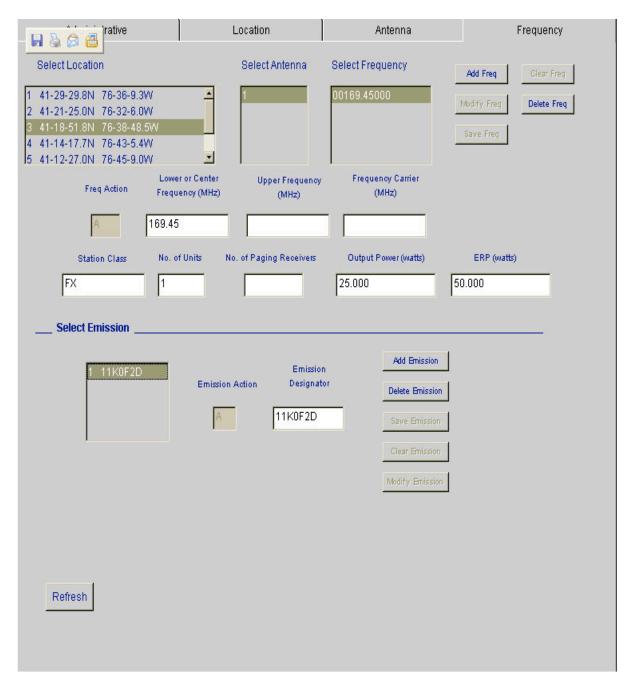


Figure 2.4-8 - Sample "Frequency" Tab

2.5 Phase III - Submit Exported ULS Information To The Interdepartmental Radio Frequency Coordinating Group (HRFCG) For Approval

Provide the following items to the HRFCG when seeking their authorization:

- Your incomplete ULS application(s) that have been exported to PDF.
- A Network drawing depicting your system configuration.
- A cover letter justifying your request for the stations.

• A letter from the local National Weather Service forecast office that supports your request.

IMPORTANT: The ULS will only save incomplete applications for a period of up to 60 days from the day they are first entered into the ULS. It is imperative to quickly proceed to Phase IV when you receive HRFCG approval.

The quickest method for filing is to email the above information in PDF format to the Chairman of the HRFCG, Larry Wenzel (larry.wenzel@noaa.gov), at 301-713-0006, ext. 147. The mailing address is Office of Hydrologic Radio Frequency, NOAA, National Weather Service, SSMC2, Room 13415, Silver Spring, MD 20910.

2.6 Phase IV - Complete Your ULS Application By Filing Your Application

In Phase IV, you upload HRFCG approval letter through the ULS and submit your FCC application.

Immediately upon receiving HRFCG approval, log in to the ULS and do the following:

- Click the "Attachment" button (located at the bottom of the screen).
 Upload your entire HRFCG request and your NOAA authorization letter to the ULS. All uploads should be in PDF.
- File your application by clicking "Submit" on the ULS application. NOTE: Do not use the "Batch File/Submit Pack" button that is visible after logging in; your application will not be successfully submitted.

After you submit each FCC application, the ULS will send you to a confirmation page like the example below (example on next page). Record the file number for future reference. If the ULS does not display a confirmation page, contact the FCC at 1-

888-225-5322, option 2, for assistance about how to proceed.

Federal Communications Commission
ULS Online Filing
OLS Offinie Filling
Application Confirmation
Application has been submitted. The file number for this application is 0001362800.
Return ? Print Preview
ULS Home Ownership Login
File Number Payment Type Code Quantity Subtotal
No application or regulatory fees are required
*
Before leaving this page, you must click and print the 159 Form to attach to your payment to ensure proper fee association and to avoid possible dismissal of this application.
If you have fees due for this filing, mail or deliver FCC Form 159 along with payment for the amount denoted in Form 159 Box 3 to:
Federal Communications Commission P. O. Box 358994
Pittsburgh, PA 15251-5994
The Form 159 and accompanying fee must be received by the Commission within 10 days of filing the application.
If you believe the calculated fee is incorrect, please call 1-888-CALLFCC and go to option #2 for assistance.
Form 159 Fees Help

Figure 2.6-1 - Sample "Application Confirmation"

2.7 Modifying Existing Licenses

You can use the ULS for all license modifications for associated call signs.

IMPORTANT: The ULS system purges all incomplete applications for either a license modification or an initial license request 30 days after you start the application. To avoid having an application that has not been submitted be purged, try using the "Check Errors" button to re-start the 30-day clock.

The process of modifying a license will consists of up to five phases.

Phase I - Determine the Type of Modification

If the license modification is an Administrative Update, then skip Phase IV and do not submit attachments with your application. If the change to the license is a major filing, then you will need to complete all the phases.

Phase II - Create a Modification Application in the ULS

Log in to the ULS.

Select the "New Filing" button.

Within the "Purpose of Application", select "Modification" or "Renewal/Modification."

When presented with the list of call signs, select the desired call sign, then click "Continue."

Wait for the ULS application to load within your WWW browser. .0.

Phase III - Enter Your License Modifications Into The ULS

This phase consists of entering your license changes into the ULS. Some of the existing license information will automatically be downloaded and editable. You should proceed completing the application in the following order:

Application Information Tab

In the "Application Information" tab, the greyed out boxes are auto-filled. The editable fields (non-greyed out) should have the following information filled-in. Ensure to use "Check Errors" when you are done.

NOTE: The editable information should be filled-in as depicted in the sample application below:

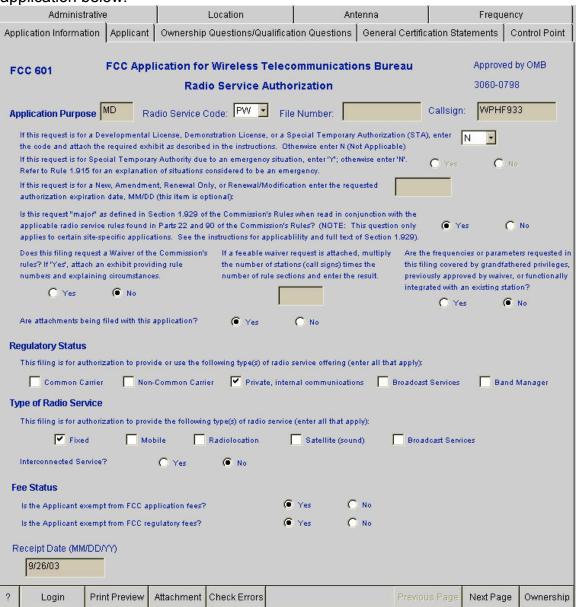


Figure 2.7-1 - Sample "Application Information"

Applicant Tab

Below is the "Applicant" tabbed-panel based on sample data; fill in any changes that are needed. Use the "Check Errors" button when you are done.

Administrative	Location	Antenna	Frequency
Application Information Applic	cant Ownership Guestions/Qualifica	tion Questions General Certific	ation Statements Control Point
Applicant Information			
FCC Registration XX06909	964	The Licensee is a(n	Government Entity
First Name:	MI: Last Na	ame:	Suffix:
Entity Name STATE EI	MERGENCY MANAGEMENT A	AGENCY	¥
Attention To: JOHN A.	DOE		
P.O. Box: 1234	Address: 321	RIDGEWAY BLVD.	
City: ANYTOWN	State:	Zip: 209	10
Phone No.: (717) 555-1	234 FAX: (717)555-1235	E-Mail: JOHN. DOE @ AT	T. NET
Name of Real Party in Interest (if different from applicant)		A TIN	of Real Party in Interest Enter to retrieve RPI name
Name of Contact Representa	ative (if different from the applicant)		
First Name:	MI:	Last Name:	Suffix
Company:			
P.O. Box:	Address:		
City:		State: Zip:	
Phone No.:	FAX	E-Mail:	
Race, Ethnicity, Gender of App	olicant/Licensee (Optional)		
Race American	Indian or Alaska Native	Asian	Black or African-American
☐ Native Hav	waiian or Other Pacific Islander	White	
Ethnicity		Gender	
? Login Print Previe	ew Attachment Check Errors	Previou	s Page Next Page Ownership

Figure 2.7-2 - Sample "Applicant"

Ownership/Qualification Tab

Answers to the questions displayed in Figure 3 below are required and will likely be the same as on the original license

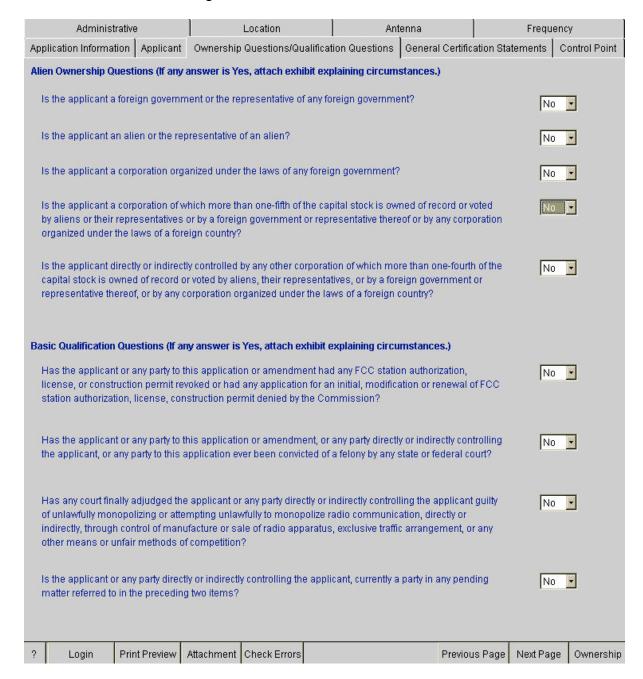


Figure 2.7-3 - Sample "Ownership Questions/Qualification Questions"

General Certification Tab

The person responsible for the application (probably same as contact person) must type in his/her name and title. The signature field will automatically be filled in with that person's name.

Administrative			Location	An	itenna		Frequency		
Appl	ication Informat	ion Applicar	t Ownership	Questions/Qualif	ication Questions	General Certific	ation Sta	atements C	ontrol Point
The	General Certification Statements The applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.								
spe *If ti	The applicant certifies that grant of this application would not cause the applicant to be in violation of any pertinent cross-ownership, attribution, or spectrum cap rule.* *If the applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.								
				application and in the	e exhibits, attachmen od faith.	rts, or documents inc	orporated	by reference ar	e material,
of the	ne Anti-Drug Abus s not apply to app	Act of 1988, 21 lications filed in	U.S.C § 862, be services exempte	cause of a conviction	opplication is subject to n for possession or dist 202(c) of the rules, 47 ocertification.	ribution of a controll	ed substa	nce. This certif	ication
				rm 602 on file with th r the Commission's ru	ne Commission, (2) is iles.	filing an updated Fo	rm 602 si	multaneously w	ith this
from of ra	routine environm	ental evaluation ation in excess o	for RF exposure of the limits speci	as set forth in 47 C.F	oh this authorization i .R. § 1.1307(b); or, (2 1310 and 2.1093; or,) have been found n	ot to caus	e human expos	ure to levels
Туре	ed or Printed Na	me of Party A	uthorized to S	ign:					
Fi	rst Name:	ohn		MI: A	Last Name:	Doe		Suffix:	
Tit	tle R	adio Commi	unications	Specialist					
Si	gnature: J	ohn A.Doe							
me det Wii (U.S	Upon grant of this license application, the licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application. WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).								
?	Login	Print Preview	Attachment	Check Errors		Previou	ıs Page	Next Page	Ownership

Figure 2.7-4 - Sample "General Certification Statements"

Control Point Tab

A Control Point can be defined as the administrative office that is responsible for maintenance of these gages and/or receives the data. The following may be helpful to remember:

- At least one control point must be listed.
- Multiple Control Points can be listed on a license.
- The maximum number of locations that can be associated to a single control point is 20.

Select the Control Point you want to change the information for and then click "Modify". Use the "Add" button to create additional Control Points or the "Delete" button for removing Control Points.

The figure below shows an application after one Control Point has been added. Location Antenna Application Information | Applicant | Ownership Questions/Qualification Questions | General Certification Statements | Control Point Select Control Point LYCOMING CTY EM Action: 1234 COURTHOUSE LANE Address: ANYTOWN State: PA City or Town County: Sullivan Save Phone Number: (717)555-2334 Clear Print Preview Attachment | Check Errors Previous Page Next Page Ownership Login

Figure 2.7-5 - Sample "Control Point"

Administrative Tab

Login

Print Preview

You should probably retain the Rule Section that is listed on form. Complete the "Describe Activity" with a general statement about the station usage.

Answer the question about "Extended Implementation" and click "Check Errors". Application Information | Applicant | Ownership Questions/Qualification Questions | General Certification Statements | Control Point Administrative Location Antenna Frequency Eligibility Rule Section A <State your intended usage> 90.17A Describe Activity Frequency Coordinator Information (if not self-coordinated) Freq Coordination # Name of Freq Coordinator Other Has this application been Telephone Number Coordination Date successfully coordinated? **Extended Implementation (Slow Growth)** Are you requesting a new or modified extended implementation plan? No 🔻 If 'Yes', attach an exhibit with a justification and a proposed station construction schedule. Associated Call Signs Select Call Sign # Add Call Sign Call Sign Save Call Sign Action Modify Call Sign **Broadcast Auxiliary Only** Is there an associated Parent Station? Facility Id of Parent Radio Service of City of Parent Station Principal State of Parent Station Station Parent Station Community Principal Community If there is no associated parent State of Primary station, this application is a Operation

Figure 2.7-6 - Sample "Administrative"

Attachment | Check Errors

Previous Page

Next Page

Ownership

Location Tab

Modifying a station is as follows:

- 1. Select a location and then click "Modify".
- 2. Make the changes to the station as shown below.
- 3. Use the "Save" button at the top of the form when you are done.
- 4. Click "Add" to add another location (up to 6 total) or "Delete" to remove a location. Then provide the information in the editable fields. You should ensure that you do not need to have an antenna structure registration (ASR) for your location by using the FCC's TOWAIR Determination at http://wireless2.fcc.gov/UlsApp/AsrSearch/towairSearch.jsp

Your "location" tab should look similar to the one below. Click the "Save" button before attempting to add another location.

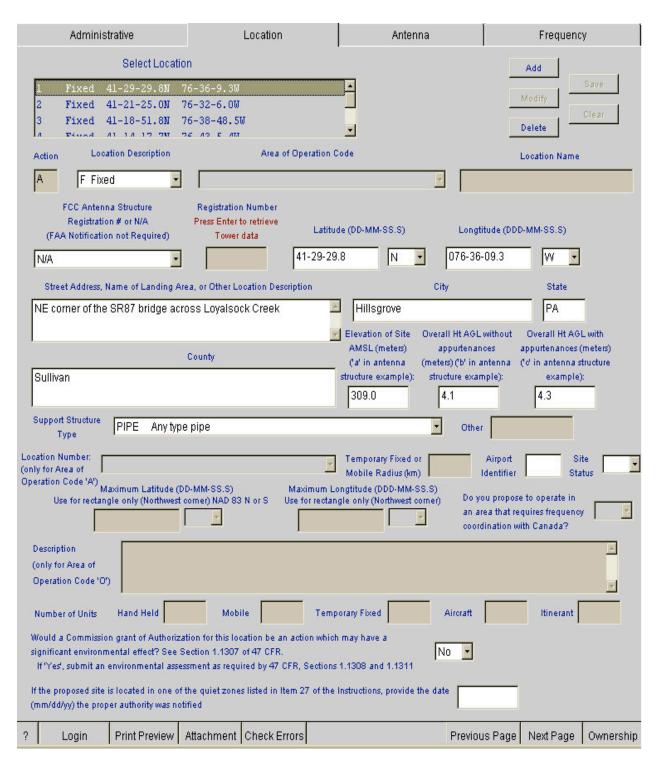


Figure 2.7-7 - Sample "Location"

Antenna Tab

To change information for an antenna, do the following:

- 1. Click Select Location
- 2. Modify >> Make the information changes
- 3. Click Save

Check for errors before selecting/changing another location. Refer to the Glossary for definitions of the antenna terms in this form. The figure below shows Antenna # 3 selected for modification.

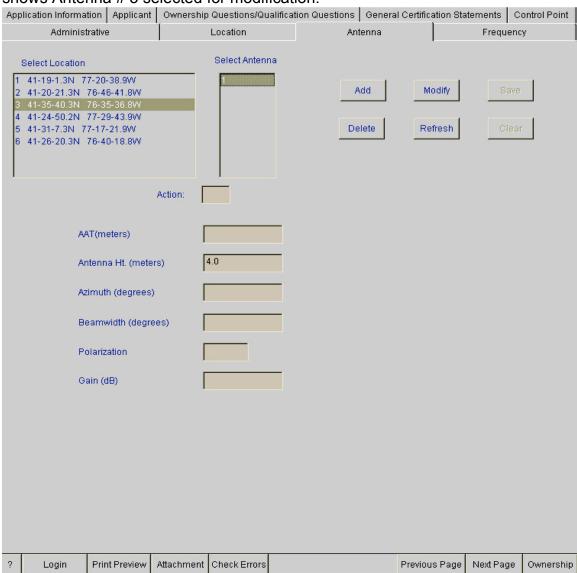


Figure 2.7-8 - Sample "Antenna"

Frequency Tab

"Frequency" is the final tab. The steps to changing the frequency by selecting the order as follows:

Location number >> Antenna number >> Frequency

Make your frequency changes, then use "Save" before selecting another location.

Note that each frequency for each antenna/frequency combination has its own emission designator.

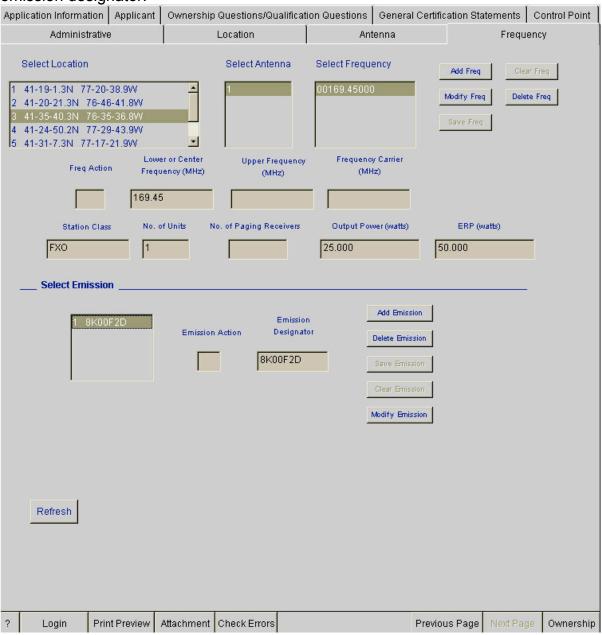


Figure 2.7-9 - Sample "Frequency"

Phase IV - Submit Exported ULS Information To The Interdepartmental Radio Frequency Coordinating Group (HRFCG) For Approval

You must submit the following items to the HRFCG to obtain their authorization:

- 1. Your incomplete ULS application(s) that has been exported to PDF.
- 2. A Network drawing depicting your system configuration.
- 3. A cover letter justifying your request for the station modifications.

IMPORTANT: The ULS system purges all incomplete applications for either license modification or initial license request 30 days after you start the application process. Use the "Check Errors" button to re-start the 30-day clock to ensure your application will not be purged.

The preferred method for submission of your application is to email the Federal Coordinator for Hydrologic Federal Radio Frequencies. The contact is Larry Wenzel (larry.wenzel@noaa.gov), at 301-713-0006, ext. 147.

Phase V - Complete Your ULS Application By Filing Your Application

In Phase V, you upload the HRFCG approval letter through the ULS and submit your FCC application.

Upon receiving HRFCG approval, log in to the ULS and do the following: Click "Attachment" button located at the bottom. Upload to ULS your entire entire HRFCG request and HRFCG authorization letter. All uploads should be in PDF. File your application by clicking "Submit" on the ULS application.

NOTE: Do not use the "Batch File/Submit Pack" button that is visible after logging in; your application will not be successfully submitted.

After you submit your FCC application, the ULS will send you to a confirmation page, (See Figure 10). Record the file number for future reference. If the ULS does not display a confirmation page, contact the FCC at 888-225-5322, option 2, for assistance about how to proceed.

Renewing Existing Licenses

License renewals can be done through the ULS for associated call signs. The process of license renewal starts 90 days from the license expiration date. The FCC notifies license holders by mail approximately 90 days prior to license expiration, but they hold applicants responsible for renewing in time.

To renew a license, perform the following steps:

- 1. Log in to the ULS.
- 2. Select the "New Filing" button.
- 3. For "Purpose of Application", select "Renewal Only".
- 4. Select the desired call sign(s), read over the certification statements, fill out the signature information fields, and then click the "Renew" button.

The renewal application is typically processed within 30 days.

Canceling An Existing License

You may cancel your license through the ULS for associated call signs. To cancel a license, perform the following steps:

- 1. Log in to the ULS.
- 2. Select the "New Filing" button.
- For "Purpose of Application", select "Cancellation Of License."
- 4. Select the desired call sign(s), read over the certification statements, fill out the signature information fields, and then click the "Cancellation" button.

Glossary
The Hydrologic Radio Frequency Licensing Guide Glossary contains a list of technical terms and definitions used in this document.

AAT	AAT is the abbreviation for "Above Average Terrain," and is measured in meters.
Administrative Update	An application filing that allows a licensee to update administrative data on its license(s) in the ULS licensing database. (Previously, applicants made administrative updates with a formal FCC modification request or an informal letter request.) Administrative changes are limited to changes in licensee name (provided there is no change in license ownership, control, or corporate structure), address, phone number, fax number, control point, e-mail address, and point of contact information. Administrative changes do not include changes in technical specifications to a license, control points, assignments or transfers, or other changes that would require a modification application. (See Modification.)
Antenna Structure Registration (ASR)	As part of its ongoing effort to promote air safety, the FCC requires owners to register certain antenna structures (generally those more than 60.96 meters (200 feet) in height or located near an airport) with the Commission.
Associated Call Sign	Call signs are considered by the FCC to be "associated" if they are linked with an FRN within the online ULS system. If the call sign was obtained before December 2001, the license call sign may not be explicitly associated with an FRN since the TIN may not have been provided. Only call signs associated with an FRN may be revised using the ULS. To view associated call signs and/or add additional call signs to your FRN, click here.
Attachment	There is a Yes/No question in the ULS application regarding whether your application includes attachments. An application for a new license or a request to modify an existing license will likely require submission of attachments pertaining to HRFCG coordination. You need to upload and submit your application to NOAA and your authorization letter from HRFCG as attachments. The FCC accepts Word Documents and text files as attachments, but it is strongly advised that all attachments be in Adobe Acrobat PDF format.
Azimuth	The direction that the transmitter faces relative to its receiver relative to true north. Azimuth angles can thus range from 0 degrees (north) through 90 (east), 180 (south), 270 (west), and up to 360 (north again).

Beamwidth	Beamwidth is an angular measure of the main lobe (or main beam) in either (or both) the horizontal-plane or vertical-plane pattern. There are several definitions for beamwidth. The half-power, or 3 dB, beamwidth is most commonly used. Consult your transmitter technical specifications to determine the narrowest acceptable antenna beamwidth for use.
Call Sign	The combination of letters and numbers that serve to identify an FCC license.
Control Point	A common point (e.g. administrative office) that monitors or uses data transmitted from the locations listed on the license. The control point is usually also responsible for maintenance of the locations
EIN	The IRS identification (also known as TIN) number for a business, non-profit, or government agency. An agency's payroll department will generally provide you with their EIN.
Emission Designator	A combination or symbols that designate transmitter bandwidth, modulation, nature of signal, and type of information. Emissions are classified and symbolized according to the following characteristics: First Symbol - antenna bandwidth. Second Symbol - type of modulation of the main carrier. Third Symbol - nature of signal(s) modulating the main carrier. Fourth Symbol - type of information to be transmitted.
ERP (Effective Radiated Power)	The power supplied to an antenna multiplied by the antenna gain in a given direction. If the direction is not specified, the direction of maximum gain is assumed.
Export to PDF	The conversion of a file from a native format (e.g., html, MS Word, MS Powerpoint, etc.,) into Adobe Acrobat PDF format. A PDF file can be opened by any user that has Acrobat Reader.
Fixed Location	An antenna that is permanently mounted. An land mobile station is an example of a station that is not fixed.
FRN	Before using ULS, you must first register with the FCC's Commission Registration System (CORES) to receive an FCC Registration Number (FRN). If you previously registered with CORES you will already have an FRN.
Gain	The ratio of output current, voltage, or power to input current, voltage, or power, respectively. Gain is usually expressed in dB.

html	The language used to create web pages for display in browsers.
Incomplete	An application within the ULS that has some or all input screens completed, but the user has not submitted the data by clicking the "Submit" button.
Location	Term used by the FCC to refer to a transmitting station.
Low Power	A transmitter whose operational power usage is kept to a minimum; typically 25 watts or less.
Major Filing	An amendment to an application or a request for modification of license that is defined as "major" in Part 1 of the Commission's rules. Examples of major filings are new applications, extension of time requests, and modifications to technical information.
Minor Filing	An amendment to an application or a request for modification of license that is defined as "minor" in Part 1 of the Commission's rules. In general, any change not defined as major is considered minor. Examples of minor filings are duplicate license, withdrawal, and cancellation.
Modification	An applicant's request to change the terms, conditions, or specifications of an existing license, other than administrative changes. (See Administrative Update.) Modifications may be major or minor. (See Major Filing and Minor Filing.)
Network Drawing	Your network drawing needs to show the proposed and existing stations that you consider to be part of your network. Existing stations are previously-licensed sites that are operational. Each type should be noted as such. Network connectivity should also be depicted. Upon completion, the drawing needs to be converted to Adobe PDF format.
NOAA	The National Oceanic and Atmospheric Administration. The National Weather Service is within the NOAA organizational umbrella.
Password	A password is assigned upon sign-up in the Commission Registration System (CORES). The user should save a printout of their FRN and password during registration. Your password must be 6 to 15 characters long and is case-sensitive. Use a password hint that does not contain the actual password itself. If you forget your password or have other password-related questions, contact FCC technical support at 202-414-1250 or corespassword@fcc.gov.

PDF Printer Driver	A printer that can be selected when a user wants to create PDF files from a software application. PDF printer drivers are available only when Adobe Acrobat software has been installed.
Polarization	The property that describes the antenna orientation. Use the following codes when entering polarization into a licensing application:
	E - Elliptical F - 45 degrees H - Horizontal J - Linear L - Left-hand circular R - Right-hand circular S - Horizontal and vertical T - Right and left-hand circular
	V - Vertical X - Other (provide a description in an attachment)
Quiet Zone	A rectangular area which is located within Virginia, West Virginia, and Garrett County, Maryland and bounded by 39 degrees 15' N on the north, 78 degrees 30' W on the east, 37 degrees 30' N on the south, and 80 degrees 30'W on the west. On February 25, 1997, the National Weather Service IFLOWS program received authority to operate transmitters, assuming locations use the lowest possible power. As of the writing of this document, the National Radio Astronomy Observatory (NRAO) still acknowledges this letter as proper authorization. If you like, you may call Denise Wirt of the NRAO at (304) 456-2107 for further information.
	NOTE: For applicants in northern United States counties, Canadian government coordination is never required for applicants using fixed stations transmitting in the 162.0375 - 174.0 MHz range.
Renewal	A grant to a licensee of an additional license term at the conclusion of the current license term. To obtain a renewal, licensees must file a renewal application on or before the current license expiration date.
TIN (Taxpayer Identification Number)	The identification number the Internal Revenue Service associates with individuals and organizations. For individuals, the TIN is their social security number and for businesses and governmental organizations, it is usually their EIN.

TOWAIR	A tool on the ULS website that allows the user to input antenna information and location coordinates for the purpose of determining if Antenna Structure Registration is required. TOWAIR can be found by clicking here.
Universal	The ULS is browser-based system for allowing electronic radio
Licensing	frequency licensing. The system will dynamically create a screen
System	that will only ask you for the information that is needed.